



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,664	03/17/2004	Shawn D. Rogers	13050/12	2665
757 7590 06/18/2007 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
			EXAMINER DICKEY, THOMAS L	
			ART UNIT 2826	PAPER NUMBER
			MAIL DATE 06/18/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/802,664	ROGERS ET AL.	
	Examiner	Art Unit	
	Thomas L. Dickey	2826	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 8-47, 49-51, 55-57 and 61-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 48, 52-54 and 58-60 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2826

## **DETAILED ACTION**

1. The amendment filed on 05/01/2007 has been entered.

### ***Claim Objections***

2. Claim 48 remains objected to because of the following informalities:

In line 12 of claim 48, there is no antecedent basis for "the rod pairs." There is antecedent basis for one of "the rod pairs," but there is no antecedent basis for the rest of them.

Claim 48 will be examined on the assumption that Applicants intended to it to read:

48. (New) An apparatus for suppressing noise in an electrical device, the apparatus comprising:  
a first conductive layer;  
a second conductive layer separated from the first conductive layer;  
a plurality of conductive rod pairs disposed in a locally periodic or nearly periodic pattern; and  
a first capacitor connecting a proximate end of  
a first conductive rod and  
a second conductive rod;  
said first conductive rod being connected to the first conductive layer and traversing the second conductive layer; said second conductive rod being connected to the second conductive layer and traversing the first conductive layer, wherein the first conductive rod and the second conductive rod are disposed adjacent to each other and form one of said plurality of conductive rod pairs.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2826

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

A. Claims 1-4, 7, 48, 52-54, and 58-60 are rejected under 35 U.S.C. 102(b) as being anticipated by HERNANDEZ (RE35,064).

With regard to claims 1-4 and 7 Hernandez discloses an apparatus for suppressing noise in an electrical device comprising a first conductive layer 132; a second conductive layer 98 (the second conductive layer is visible, but not numbered, in figure 13. It is the conductive layer separated from lattice 124 by a first dielectric layer 92, also not numbered in figure 13 but numbered 12 (figure 9 shows numeral 12, but that part is referred to in figure 10 and the written description as dielectric layer 92. The written description does not refer to a part #12 in figure 9) in figure 9. Since figure 9 uses part #98 to refer to the second conductive layer, and figure 13 uses no part #, the second conductive layer will be referred to, for convenience, as part #98) separated from first conductive layer 132; first conductive rods 120 (not numbered in figure 13, the same part is numbered 120 in figure 12) comprising plated vias passing through a first dielectric layer 92 (see the discussion above concerning second conductive layer 98. The first dielectric layer is shown without reference # in figure 13, referenced as part #12 in figure 9, and discussed in the written description as part #92) disposed between the first 132 and second 98 conductive layers, connected to the second conductive layer 98, and extending to the first conductive layer 132; and chip capacitors 102

Art Unit: 2826

arrayed over substantially an entire area of the first conductive layer 132, connecting the first conductive rods 120 to the first conductive layer 132, and arranged in a lattice 124. Note figures 7-10 and 13 (note that figure 13 employs two lattices 124 and 126 of the sort shown in detail in figure 9 as lattice 96, said lattice 96 being identified as a lattice 44 of chip capacitors 102 in figures 6-8, the construction of said lattice 44 being detailed in figures 6-8. The rectangular lattice of chips 102 is best seen in cutaway figure 10), column 5 lines 19-36, column 6 lines 2-24 and 65-67, and column 7 lines 1-8 of Hernandez.

With regard to claims 48, 52-54, 58, 59, and 60 Hernandez discloses an apparatus for suppressing noise in an electrical device comprising a first conductive layer 132 of a multilayered printed circuit board; a second conductive layer 98 (the second conductive layer is visible, but not numbered, in figure 12. It is the conductive layer separated from lattice 124 by a first dielectric layer 92, also not numbered in figure 13 but numbered 12 (figure 9 shows numeral 12, but that part is referred to in figure 10 and the written description as dielectric layer 92. The written description does not refer to a part #12 in figure 9) in figure 9. Since figure 9 uses part #98 to refer to the second conductive layer, and figure 12 uses no part #, the second conductive layer will be referred to, for convenience, as part #98) of said multilayered printed circuit board separated from the first conductive layer 132; a plurality of conductive rod pairs 118-120 disposed in a rectangular periodic pattern; and a first chip capacitor 102 disposed on an outer surface of the printed circuit board and connecting a proximate end of a first conductive rod 120

Art Unit: 2826

and a second conductive rod 118; said first conductive rod 120 being connected to the first conductive layer 132 and traversing the second conductive layer 98; said second conductive rod 118 being connected to the second conductive layer 98 and traversing the first conductive layer 132, wherein the first conductive rod 120 and the second conductive rod 118 are disposed adjacent to each other and form one of said plurality of conductive rod pairs 118-120. Note figures 7-10 and 12 (note that figure 12 employs lattice 96 as shown in detail in figure 9, said lattice 96 being identified as a lattice 44 of chip capacitors 102 in figures 6-8, the construction of said lattice 44 being detailed in figures 6-8. The rectangular lattice of chips 102 is best seen in cutaway figure 10), column 5 lines 19-36, column 6 lines 2-24 and 65-67, and column 7 lines 1-8 of Hernandez.

The applicant's claims 59 and 60 do not distinguish over the Hernandez reference regardless of the functions allegedly performed by the claimed device, because only the device per se is relevant, not the recited functions of accommodating circuit components and accommodating signal and ground connections.

Note that functional language in a device claim is directed to the device per se, no matter which of the device's functions is referred to in the claim. See *In re Ludtke and Sloan*, 169 USPQ 563 at 567, and *In re Swinehart* 169 USPQ 226, both of which make it clear that it is the patentability of the device per se which must be determined in a "functional language" claim and not the patentability of the function, and that an old or obvious device alleged to perform a new function is not patentable as a device, whether

Art Unit: 2826

claimed in “functional language” claims or not. Note that applicant has the burden of proof in such cases, as the above caselaw makes clear. See also *In re Schreiber*, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997), for a discussion of the roles of examiner and applicant in determining when and how functional limitations distinguish a claim from prior art disclosing the same structure.

**B.** Claims 48, 52-54, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by MCKINZIE III (6,476,771).

With regard to claims 48, 52-54, and 58, McKinzie III discloses an apparatus for suppressing noise in an electrical device comprising a first conductive layer 903 of a multilayered printed circuit board 900; a second conductive layer 901 of said multilayered printed circuit board 900 separated from the first conductive layer 903; a plurality of conductive rod pairs 921-922 disposed in a rectangular periodic pattern (see fig. 9B); and a first chip capacitor 911 (McKinzie III refers to the chip capacitors 911 and 914 as a “capacitive frequency selective surface (FSS) capacitor”) disposed on an outer surface of the printed circuit board 900 and connecting a proximate end of a first conductive rod 922 and a second conductive rod 921; said first conductive rod 922 being connected to the first conductive layer 903 and traversing the second conductive layer 901; said second conductive rod 921 being connected to the second conductive layer 901 and traversing the first conductive layer 903, wherein the first conductive rod 922 and the second conductive rod 921 are disposed adjacent to each other and form

Art Unit: 2826

one of said plurality of conductive rod pairs. Note figures 9A-9B and column 5 lines 10-67 of McKinzie III.

### ***Response to Arguments***

4. Applicant's arguments filed 05/01/2007 have been fully considered but they are not persuasive.

It is argued, at page 13 of the remarks, that "[A]' or 'an' in patent parlance carries the meaning of 'one or more' in open-ended claims containing the transitional phrase 'comprising.' See *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973,977, 52 USPQ2d 1109, 1112 (Fed. Cir. 1999); *AbTox Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023, 43 USPQ2d 1545, 1548 (Fed.Cir. 1997); *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1575-76, 28 USPQ2d 1333, 1336 (Fed.Cir. 1993); see also Robert C. Faber, *Landis on Mechanics of Patent Claim Drafting* 531 (3d ed. 1990). Unless the claim is specific as to the number of elements, the article 'a' receives a singular interpretation only in rare circumstances when the patentee evinces a clear intent to so limit the article." However, Applicant has merely cited a well-known line of cases that explain that, because an open-ended claim excludes nothing, the transitional phrase "comprising" means that a claim's reference to "a" item does not exclude unclaimed items even if they are identical to the claimed item. See MPEP § 2111.03. Essentially, these cases teach us that when we compare an open-ended claim to an anticipating



Art Unit: 2826

reference or an infringing device, we should assume that “a” means, “definitely one, and optionally more.”

The problem is that the one rod pair (“a conductive rod pair,” as recited in line 9) we know is definitely present in the claimed device has a large number of specific qualities, recited in lines 3 through 8. The reader is completely in the dark as to whether the rest of “the rod pairs” (remember, the line 9 recital of “a rod pair” means that any additional rod pairs are completely optional) of line 12 are required to have any of these properties. Recital of “a plurality of conductive rod pairs,” (as opposed to “a plurality of the conductive rod pairs,” as the claim now reads) would introduce (at least) two brand new conductive line pairs. It would be clearly understood that neither of the new, line 12 rod pairs would be required to have the properties of the line 9 rod pair, although they would (and the line 9 rod pair would not) have to be “disposed in a locally periodic or nearly periodic pattern.” Is that Applicant’s intent? One rod pair to do all the connecting and traversing relative to the conductive layers and the capacitor, and a plurality of other pairs to form the periodic pattern?

Or is it Applicant’s intent to claim a plurality of rod pairs, arranged periodically, each having the same properties? If such be the case, the Examiner is sure that Professor Landis, were he still with us, would urge Applicant to begin his claim by reciting:

a plurality of rod pairs, arranged periodically, each having the following properties:

It is argued, at page 14 of the remarks, that “In the present Claim 48, the recitation of ‘a conductive line pair’ in line 9 serves as the antecedent basis for the recitation of ‘a

Art Unit: 2826

plurality of the conductive line pairs' in line 12, in idiomatic English." Huh? That's idiomatic English? Applicant is challenged to bring forth one authoritative reference (Manual of Style, High School or College textbook, textbook teaching English to non-English speakers, etc.) teaching that it is within the English idiom to use the singular as antecedent to the plural.

It is further argued at page 14 that "Hernandez clearly teaches away from this element being a discrete capacitor at col. 6, lines 38-49, where the advantages of the invention taught is that it 'eliminate[es] the need for discrete decoupling capacitors.'" However, it has been held that under 35 USC 102, the sole test of anticipation is whether every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) ("When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art."); *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) ("The identical invention must be shown in as complete detail as is contained in the ... claim"); and MPEP § 2131. The issue of whether Hernandez et al. had different motives ("teaches away") from Applicants is immaterial in the context of section 102.

Art Unit: 2826

It is further argued at page 14 that, "Moreover, an isolated ceramic chip is not a capacitor per se..." However, during patent examination, the pending claims must be given their "broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re American Academy of Science Tech Center*, WL 1067528 (Fed. Cir. May 13, 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation). This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004).

Dorland's Illustrated Medical Dictionary's defines "capacitor" as "a device for holding and storing charges of electricity." This, in the Examiner's judgment, is the "broadest reasonable meaning" of the claim term "capacitor." Evidence (such as the dictionary the Examiner just cited) shows "capacitor" is generally understood to encompass any device, regardless of structure, for holding and storing charge. Because Hernandez's "spaced ceramic chips" (as Applicant refers to them) store charges the Examiner

Art Unit: 2826

remains convinced that the “capacitor” of claim 48 reads on (note, *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973,977, 52 USPQ2d 1109, 1112 (Fed. Cir. 1999), that it is proper to “read” the singular onto the plural) Hernandez’s “spaced ceramic chips.”

Because these “spaced ceramic chips” are (as Applicant points out) chips, the Examiner remains convinced that the “chip capacitors” of claim 1 read on them.

It is argued, at page 15 of the remarks, that “The Applicants respectfully traverse the Examiner's characterization of elements 911 and 914 as ‘chip capacitors’ or even as capacitors, based on a purported association in [McKinzie III, 6,476,771] with ‘capacitive frequency surface (FSS) capacitors.’ The term ‘capacitive frequency selective surface (FSS)’ is used to describe element 102 in FIG. 1 (col. 3, lines 29-31), and is not found elsewhere in [McKinzie III’s] specification, nor is the word ‘capacitor’ found in the phrase.” Under *Hyatt*’s “broadest reasonable meaning” standard (see above), Applicant’s argument is found unpersuasive as to the “capacitor” (insofar as McKinzie III makes it clear that a “capacitive frequency selective surface (FSS)” stores charge) of claims 48, 52-54 and 58; but persuasive as to the “chip capacitor” of claims 1-7. The rejection of claims 1-7 over McKinzie III has been withdrawn.

### ***Allowable Subject Matter***

5. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2826

***Conclusion***

**6. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

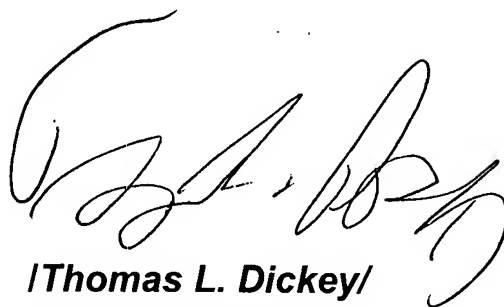
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Sue A. Purvis, at 571-272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

Art Unit: 2826

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'T. L. Dickey', is positioned above the printed name.

**/Thomas L. Dickey/  
Primary Examiner  
Art Unit 2826**